WHAT IS CLAIMED IS:

1. An dental instrument comprising:

(a) a hollow shank having, a rearward fitting, and a forward head including a contact region and a window in proximity thereto;

(b) said contact region being adapted for cutting, scraping, and/or grinding dental tissue;

(c) a source of laser energy;

(d) said window being transmissive with respect to said laser energy; and

(e) a fiber optic bundle extending from said source of laser energy, through said fitting and said shank for communication with said window;

(f) said dental instrument enabling a dental professional to subject a surgical site simultaneously to (1) said mechanical cutting, scraping and/or grinding, and (2) said laser energy for trimming and cauterization, for simultaneous removal of diseased tissue and destruction of residual bacteria.

2. The dental instrument of claim 1 wherein said contact region is a sickle scaler for removing supragingival plaque

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and calculus, said sickle scaler having a flat surface with two cutting edges that converge at a cutting tip.

3. The dental instrument of claim 1 wherein said contact region is a curette for subgingival scaling, root planing, and soft tissue debridement, said curetter having cutting edges that are set at approximataely a 90 degree angle with respect to the axis of the shank.

4. The dental instrument of claim 1 wherein said contact region is a hoe scaler to aid in calculus and diseased cementum removal.

5. The dental instrument of claim 1 wherein said contact region is a chisel scaler to aid in calculus and diseased cementum removal.

6. The dental instrument of claim 1 wherein said contact region is a file scaler to aid in calculus and diseased cementum removal.

7. The dental instrument of claim 1 wherein said laser energy is produced by a solid state diode laser in the low infrared spectrum of 600nm to 1100nm.

8. The dental instrument of claim 1 wherein said laser energy is produced by at least on solid state diode laser in the approximate vicinities of 870nm and 930nm.

9. A dental process for applying a dental instrument comprising:

(a) a hollow shank having, a rearward fitting, and a forward head including a contact region and a window in proximity thereto;

(b) said contact region being adapted for cutting, scraping, and/or grinding dental tissue;

(c) a source of laser energy;

(d) said window being transmissive with respect to said laser energy; and

(e) a fiber optic bundle extending from said source of laser energy, through said fitting and said shank for communication with said window;

(f) said dental process including the steps of subjecting a surgical site simultaneously to (1) said mechanical cutting, scraping and/or grinding, and (2) said laser energy for trimming and cauterization, for simultaneous removal of diseased tissue and destruction of residual bacteria;

(g) said laser energy being produced by at least one solid state diode laser in the low infrared spectrum approximating 600nm and 1100nm, able to fully penetrate any periodontal pocket, cementum, and surrounding bony architecture

10. A process for performing dental surgery with an instrument comprising:

(a) a hollow shank having, a rearward fitting, and a forward head including a contact region and a window in proximity thereto;

(b) said contact region being adapted for cutting, scraping, and/or grinding dental tissue;

(c) a source of laser energy;

(d) said window being transmissive with respect to said laser energy; and

(e) a fiber optic bundle extending from said source of laser energy, through said fitting and said shank for communication with said window;

(f) said dental process including the steps of applying said instrument to subject a surgical site simultaneously to (1) said mechanical cutting, scraping and/or grinding, and (2) said laser energy for trimming and cauterization, for simultaneous removal of diseased tissue and destruction of residual bacteria;

(g) said laser energy being generated by at least a diode laser in the approximate range of 870nm and 930 nm.